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Pollard, Michelle

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Thr Ile Gly Val Ala Lys Asn Ser Ala Leu Gly Pro Arg Arg Leu Arg
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Ala Ser Trp Leu Val Ile Thr Leu Val Cys Leu Phe Val Gly Ile Tyr
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Ala Met Val Lys Leu Leu Leu Phe Ser Glu Val Arg Arg Pro Ile Arg
            100                 105                 110
Asp Pro Trp Phe Trp Ala Leu Phe Val Trp Thr Tyr Ile Ser Leu Gly
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Gln Ala Leu Glu Pro Gly Ala Ala Thr Glu Ala Glu Gly Phe Pro Gly
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Pro Asp His Leu Glu Gly Arg Val Asp Phe Glu Asn Val Thr Phe Thr
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Leu Gln Lys His Thr Val Leu Ile Ile Ala His Arg Leu Ser Thr Val
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Glu His Ala His Leu Ile Val Val Leu Asp Lys Gly Arg Val Val Gln
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Gln Gly Thr His Gln Gln Leu Leu Ala Gln Gly Gly Leu Tyr Ala Lys
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Leu Pro Leu Met Met Leu Val Phe Gly Glu Met Thr Asp Ile Phe Ala
65                  70                  75                  80
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Glu Leu Glu Arg Tyr Asn Lys Asn Leu Glu Glu Ala Lys Arg Ile Gly
        275                 280                 285
Ile Lys Lys Ala Ile Thr Ala Asn Ile Ser Ile Gly Ala Ala Phe Leu
    290                 295                 300
Leu Ile Tyr Ala Ser Tyr Ala Leu Ala Phe Trp Tyr Gly Thr Thr Leu
305                 310                 315                 320
Val Leu Ser Gly Glu Tyr Ser Ile Gly Gln Val Leu Thr Val Phe Phe
                325                 330                 335
```

```
Ser Val Leu Ile Gly Ala Phe Ser Val Gly Gln Ala Ser Pro Ser Ile
            340                 345                 350
Glu Ala Phe Ala Asn Ala Arg Gly Ala Ala Tyr Glu Ile Phe Lys Ile
        355                 360                 365
Ile Asp Asn Lys Pro Ser Ile Asp Ser Tyr Ser Lys Ser Gly His Lys
    370                 375                 380
Pro Asp Asn Ile Lys Gly Asn Leu Glu Phe Arg Asn Val His Phe Ser
385                 390                 395                 400
Tyr Pro Ser Arg Lys Glu Val Lys Ile Leu Lys Gly Leu Asn Leu Lys
                405                 410                 415
Val Gln Ser Gly Gln Thr Val Ala Leu Val Gly Asn Ser Gly Cys Gly
            420                 425                 430
Lys Ser Thr Thr Val Gln Leu Met Gln Arg Leu Tyr Asp Pro Thr Glu
        435                 440                 445
Gly Met Val Ser Val Asp Gly Gln Asp Ile Arg Thr Ile Asn Val Arg
    450                 455                 460
Phe Leu Arg Glu Ile Ile Gly Val Val Ser Gln Glu Pro Val Leu Phe
465                 470                 475                 480
Ala Thr Thr Ile Ala Glu Asn Ile Arg Tyr Gly Arg Glu Asn Val Thr
                485                 490                 495
Met Asp Glu Ile Glu Lys Ala Val Lys Glu Ala Asn Ala Tyr Asp Phe
            500                 505                 510
Ile Met Lys Leu Pro His Lys Phe Asp Thr Leu Val Gly Glu Arg Gly
        515                 520                 525
Ala Gln Leu Ser Gly Gly Gln Lys Gln Arg Ile Ala Ile Ala Arg Ala
    530                 535                 540
Leu Val Arg Asn Pro Lys Ile Leu Leu Leu Asp Glu Ala Thr Ser Ala
545                 550                 555                 560
Leu Asp Thr Glu Ser Glu Ala Val Val Gln Val Ala Leu Asp Lys Ala
                565                 570                 575
Arg Lys Gly Arg Thr Thr Ile Val Ile Ala His Arg Leu Ser Thr Val
            580                 585                 590
Arg Asn Ala Asp Val Ile Ala Gly Phe Asp Asp Gly Val Ile Val Glu
        595                 600                 605
Lys Gly Asn His Asp Glu Leu Met Lys Glu Lys Gly Ile Tyr Phe Lys
    610                 615                 620
Leu Val Thr Met Gln Thr Ala Gly Asn Glu Val Glu Leu Glu Asn Ala
625                 630                 635                 640
Ala Asp Glu Ser Lys Ser Glu Ile Asp Ala Leu Glu Met Ser Ser Asn
                645                 650                 655
Asp Ser Arg Ser Ser Leu Ile Arg Lys Arg Ser Thr Arg Arg Ser Val
            660                 665                 670
Arg Gly Ser Gln Ala Gln Asp Arg Lys Leu Ser Thr Lys Glu Ala Leu
        675                 680                 685
Asp Glu Ser Ile Pro Pro Val Ser Phe Trp Arg Ile Met Lys Leu Asn
    690                 695                 700
Leu Thr Glu Trp Pro Tyr Phe Val Val Gly Val Phe Cys Ala Ile Ile
705                 710                 715                 720
Asn Gly Gly Leu Gln Pro Ala Phe Ala Ile Ile Phe Ser Lys Ile Ile
                725                 730                 735
Gly Val Phe Thr Arg Ile Asp Asp Pro Glu Thr Lys Arg Gln Asn Ser
            740                 745                 750
Asn Leu Phe Ser Leu Leu Phe Leu Ala Leu Gly Ile Ile Ser Phe Ile
        755                 760                 765
```

```
Thr Phe Phe Leu Gln Gly Phe Thr Phe Gly Lys Ala Gly Glu Ile Leu
    770                 775                 780
Thr Lys Arg Leu Arg Tyr Met Val Phe Arg Ser Met Leu Arg Gln Asp
785                 790                 795                 800
Val Ser Trp Phe Asp Asp Pro Lys Asn Thr Thr Gly Ala Leu Thr Thr
                805                 810                 815
Arg Leu Ala Asn Asp Ala Ala Gln Val Lys Gly Ala Ile Gly Ser Arg
            820                 825                 830
Leu Ala Val Ile Thr Gln Asn Ile Ala Asn Leu Gly Thr Gly Ile Ile
        835                 840                 845
Ile Ser Phe Ile Tyr Gly Trp Gln Leu Thr Leu Leu Leu Leu Ala Ile
    850                 855                 860
Val Pro Ile Ile Ala Ile Ala Gly Val Val Glu Met Lys Met Leu Ser
865                 870                 875                 880
Gly Gln Ala Leu Lys Asp Lys Lys Glu Leu Glu Gly Ala Gly Lys Ile
                885                 890                 895
Ala Thr Glu Ala Ile Glu Asn Phe Arg Thr Val Val Ser Leu Thr Gln
            900                 905                 910
Glu Gln Lys Phe Glu His Met Tyr Ala Gln Ser Leu Gln Val Pro Tyr
        915                 920                 925
Arg Asn Ser Leu Arg Lys Ala His Ile Phe Gly Ile Thr Phe Ser Phe
    930                 935                 940
Thr Gln Ala Met Met Tyr Phe Ser Tyr Ala Gly Cys Phe Arg Phe Gly
945                 950                 955                 960
Ala Tyr Leu Val Ala His Lys Leu Met Ser Phe Glu Asp Val Leu Leu
                965                 970                 975
Val Phe Ser Ala Val Val Phe Gly Ala Met Ala Val Gly Gln Val Ser
            980                 985                 990
Ser Phe Ala Pro Asp Tyr Ala Lys Ala Lys Ile Ser Ala Ala His Ile
        995                 1000                1005
Ile Met Ile Ile Glu Lys Thr Pro Leu Ile Asp Ser Tyr Ser Thr Glu
    1010                1015                1020
Gly Leu Met Pro Asn Thr Leu Glu Gly Asn Val Thr Phe Gly Glu Val
1025                1030                1035                1040
Val Phe Asn Tyr Pro Thr Arg Pro Asp Ile Pro Val Leu Gln Gly Leu
                1045                1050                1055
Ser Leu Glu Val Lys Lys Gly Gln Thr Leu Ala Leu Val Gly Ser Ser
            1060                1065                1070
Gly Cys Gly Lys Ser Thr Val Val Gln Leu Leu Glu Arg Phe Tyr Asp
        1075                1080                1085
Pro Leu Ala Gly Lys Val Leu Leu Asp Gly Lys Glu Ile Lys Arg Leu
    1090                1095                1100
Asn Val Gln Trp Leu Arg Ala His Leu Gly Ile Val Ser Gln Glu Pro
1105                1110                1115                1120
Ile Leu Phe Asp Cys Ser Ile Ala Glu Asn Ile Ala Tyr Gly Asp Asn
                1125                1130                1135
Ser Arg Val Val Ser Gln Glu Glu Ile Val Arg Ala Ala Lys Glu Ala
            1140                1145                1150
Asn Ile His Ala Phe Ile Glu Ser Leu Pro Asn Lys Tyr Ser Thr Lys
        1155                1160                1165
Val Gly Asp Lys Gly Thr Gln Leu Ser Gly Gly Gln Lys Gln Arg Ile
    1170                1175                1180
Ala Ile Ala Arg Ala Leu Val Arg Gln Pro His Ile Leu Leu Leu Asp
1185                1190                1195                1200
```

```
Glu Ala Thr Ser Ala Leu Asp Thr Glu Ser Glu Lys Val Val Gln Glu
                1205                1210                1215
Ala Leu Asp Lys Ala Arg Glu Gly Arg Thr Cys Ile Val Ile Ala His
            1220                1225                1230
Arg Leu Ser Thr Ile Gln Asn Ala Asp Leu Ile Val Val Phe Gln Asn
        1235                1240                1245
Gly Arg Val Lys Glu His Gly Thr His Gln Gln Leu Leu Ala Gln Lys
    1250                1255                1260
Gly Ile Tyr Phe Ser Met Val Ser Val Gln Ala Gly Thr Lys Arg Gln
1265                1270                1275                1280


<210> 8
<211> 2001
<212> PRT
<213> Homo sapiens

<220>
<221> VARIANT
<222> 30, 70, 280, 477, 558, 1471, 1651, 1689, 1724
<223> Xaa = Any Amino Acid

<221> VARIANT
<222> 30, 70, 280, 477, 558, 1471, 1651, 1689, 1724
<223> Xaa = Any Amino Acid

<400> 8
Met Ser Ser Leu Gly Phe Thr Ser Lys Glu Gln Arg Asn Leu Gly Leu
 1               5                  10                  15
Leu Val His Leu Met Thr Ser Asn Pro Lys Ile Leu Tyr Xaa Pro Ala
            20                  25                  30
Gly Ser Glu Val Asp Arg Val Ile Leu Lys Ala Asn Glu Thr Phe Ala
        35                  40                  45
Phe Val Gly Asn Val Thr His Tyr Ala Gln Val Trp Leu Asn Ile Ser
    50                  55                  60
Ala Glu Ile Arg Ser Xaa Leu Glu Gln Gly Arg Leu Gln Gln His Leu
65                  70                  75                  80
Arg Trp Leu Gln Gln Tyr Val Ala Glu Leu Arg Pro His Pro Glu Ala
                85                  90                  95
Leu Asn Leu Ser Leu Asp Glu Leu Pro Pro Ala Leu Arg Gln Asp Asn
            100                 105                 110
Phe Ser Leu Pro Ser Gly Met Ala Leu Leu Gln Gln Leu Asp Thr Ile
        115                 120                 125
Asp Asn Ala Pro Cys Gly Trp Ile Gln Phe Met Ser Lys Val Ser Val
    130                 135                 140
Asp Ile Phe Lys Gly Phe Pro Asp Glu Glu Ser Ile Val Asn Tyr Thr
145                 150                 155                 160
Leu Asn Gln Ala Tyr Gln Asp Asn Val Thr Val Phe Ala Gly Val Ile
                165                 170                 175
Phe Gln Thr Arg Lys Asp Gly Ser Leu Pro Pro His Val His Tyr Lys
            180                 185                 190
Ile Arg Gln Asn Ser Ser Phe Thr Glu Lys Thr Asn Glu Ile Arg Arg
        195                 200                 205
Ala Tyr Trp Arg Pro Gly Pro Asn Thr Gly Gly Arg Phe Tyr Phe Leu
```

```
    210                 215                 220
Tyr Gly Phe Val Trp Ile Gln Asp Met Met Glu Arg Ala Ile Ile Asp
225                 230                 235                 240
Thr Phe Val Gly His Asp Val Val Glu Pro Gly Ser Tyr Val Gln Met
                245                 250                 255
Phe Pro Tyr Pro Cys Tyr Thr Arg Asp Asp Phe Leu Phe Val Ile Glu
            260                 265                 270
His Met Met Pro Leu Cys Met Xaa Ile Ser Trp Val Tyr Ser Val Ala
        275                 280                 285
Met Thr Ile Gln His Ile Val Ala Glu Lys Glu His Arg Leu Lys Glu
    290                 295                 300
Val Met Lys Thr Met Gly Leu Asn Asn Ala Val His Trp Val Ala Trp
305                 310                 315                 320
Phe Ile Thr Gly Phe Val Gln Leu Ser Ile Ser Val Thr Ala Leu Thr
                325                 330                 335
Ala Ile Leu Lys Tyr Gly Gln Val Leu Met His Ser His Val Val Ile
            340                 345                 350
Ile Trp Leu Phe Leu Ala Val Tyr Ala Val Ala Thr Ile Met Phe Cys
        355                 360                 365
Phe Leu Val Ser Val Leu Tyr Ser Lys Ala Lys Leu Ala Ser Ala Gly
    370                 375                 380
Gly Ile Ile Tyr Phe Leu Ser Tyr Val Pro Tyr Met Tyr Val Ala Ile
385                 390                 395                 400
Arg Glu Glu Val Ala His Asp Lys Ile Thr Ala Phe Glu Lys Cys Ile
                405                 410                 415
Ala Ser Leu Met Ser Thr Thr Ala Phe Gly Leu Gly Ser Lys Tyr Phe
            420                 425                 430
Ala Leu Tyr Glu Val Ala Gly Val Gly Ile Gln Trp His Thr Phe Ser
        435                 440                 445
Gln Ser Pro Val Glu Gly Asp Asp Phe Asn Leu Leu Leu Ala Val Thr
    450                 455                 460
Met Leu Met Val Asp Ala Val Val Tyr Gly Ile Leu Xaa Trp Tyr Ile
465                 470                 475                 480
Glu Ala Val His Pro Gly Met Tyr Gly Leu Pro Arg Pro Trp Tyr Phe
                485                 490                 495
Pro Leu Gln Lys Ser Tyr Trp Leu Gly Ser Gly Arg Thr Glu Ala Trp
            500                 505                 510
Glu Trp Ser Trp Pro Trp Ala Arg Thr Pro Arg Leu Ser Val Met Glu
        515                 520                 525
Glu Asp Gln Ala Cys Ala Met Glu Ser Arg Arg Phe Glu Glu Thr Arg
    530                 535                 540
Gly Met Glu Glu Glu Pro Thr His Leu Pro Leu Val Val Xaa Val Asp
545                 550                 555                 560
Lys Leu Thr Lys Val Tyr Lys Asp Asp Lys Lys Leu Ala Leu Asn Lys
                565                 570                 575
Leu Ser Leu Asn Leu Tyr Glu Asn Gln Gly Val Ser Phe Leu Gly His
            580                 585                 590
Asn Gly Ala Gly Lys Thr Thr Thr Met Ser Ile Leu Thr Gly Leu Phe
        595                 600                 605
Pro Pro Thr Ser Gly Ser Ala Thr Ile Tyr Gly His Asp Ile Arg Thr
    610                 615                 620
Glu Met Asp Glu Ile Arg Lys Asn Gly His Val Pro Gln His Asn Val
625                 630                 635                 640
Leu Phe Asp Arg Leu Thr Val Glu Glu His Leu Trp Phe Tyr Ser Arg
```

```
                645                 650                 655
Leu Lys Ser Met Ala Gln Glu Glu Ile Pro Arg Glu Met Asp Lys Met
            660                 665                 670
Ile Glu Asp Leu Glu Leu Ser Asn Lys Arg His Ser Leu Val Gln Thr
        675                 680                 685
Leu Ser Gly Gly Met Lys Arg Lys Val Ser Val Ala Ile Ala Phe Val
    690                 695                 700
Gly Gly Ser Arg Ala Ile Ile Leu Asp Glu Pro Thr Ala Gly Val Asp
705                 710                 715                 720
Pro Tyr Ala Arg Arg Ala Ile Trp Asp Leu Ile Leu Lys Tyr Lys Pro
                725                 730                 735
Gly Arg Thr Ile Leu Leu Ser Thr His His Met Asp Glu Ala Asp Leu
            740                 745                 750
Leu Gly Asp Arg Ile Ala Ile Ile Ser His Gly Lys Leu Lys Cys Cys
        755                 760                 765
Gly Ser Pro Leu Phe Leu Lys Gly Thr Tyr Gly Asp Gly Tyr Arg Leu
    770                 775                 780
Thr Leu Val Lys Arg Pro Ala Glu Pro Gly Gly Pro Gln Glu Pro Gly
785                 790                 795                 800
Leu Ala Ser Ser Pro Pro Gly Arg Ala Pro Leu Ser Ser Cys Ser Glu
                805                 810                 815
Leu Gln Val Ser Gln Phe Ile Arg Lys His Val Ala Ser Cys Leu Leu
            820                 825                 830
Val Ser Asp Thr Ser Thr Glu Leu Ser Tyr Ile Leu Pro Ser Glu Ala
        835                 840                 845
Ala Lys Lys Gly Ala Phe Glu Arg Leu Phe Gln His Leu Glu Arg Ser
    850                 855                 860
Leu Asp Ala Leu His Leu Ser Ser Phe Gly Leu Met Asp Thr Thr Leu
865                 870                 875                 880
Glu Glu Val Phe Leu Lys Val Ser Gly Gly Asp Gln Ser Leu Glu Asn
                885                 890                 895
Ser Gly Ala Asp Val Lys Glu Ser Arg Lys Asp Val Leu Pro Gly Ala
            900                 905                 910
Glu Gly His Ala Ser Gly Glu Gly His Ala Gly Asn Leu Ala Arg Cys
        915                 920                 925
Ser Glu Leu Thr Gln Ser Gln Ala Ser Leu Gln Ser Ala Ser Ser Val
    930                 935                 940
Gly Ser Ala Leu Gly Asp Glu Gly Ala Gly Tyr Thr Asp Val Tyr Gly
945                 950                 955                 960
Asp Tyr Pro Pro Leu Phe Asp Asn Pro Gln Asp Pro Asp Asn Val Ser
                965                 970                 975
Leu Gln Glu Val Glu Ala Glu Ala Leu Ser Arg Val Gly Gln Gly Ser
            980                 985                 990
Arg Lys Leu Asp Gly Gly Trp Leu Lys Val Arg Gln Phe His Gly Leu
        995                 1000                1005
Leu Val Lys Arg Phe His Cys Ala Arg Arg Asn Ser Lys Ala Leu Phe
    1010                1015                1020
Ser Gln Ile Leu Leu Pro Ala Phe Phe Val Cys Val Ala Met Thr Val
1025                1030                1035                1040
Ala Leu Ser Val Pro Glu Ile Gly Asp Leu Pro Pro Leu Val Leu Ser
                1045                1050                1055
Pro Ser Gln Tyr His Asn Tyr Thr Gln Pro Arg Gly Asn Phe Ile Pro
            1060                1065                1070
Tyr Ala Asn Glu Glu Arg Arg Glu Tyr Arg Leu Arg Leu Ser Pro Asp
```

```
        1075                1080                1085
Ala Ser Pro Gln Gln Leu Val Ser Thr Phe Arg Leu Pro Ser Gly Val
    1090                1095                1100
Gly Ala Thr Cys Val Leu Lys Ser Pro Ala Asn Gly Ser Leu Gly Pro
1105                1110                1115                1120
Thr Leu Asn Leu Ser Ser Gly Glu Ser Arg Leu Leu Ala Ala Arg Phe
                1125                1130                1135
Phe Asp Ser Met Cys Leu Glu Ser Phe Thr Gln Gly Leu Pro Leu Ser
            1140                1145                1150
Asn Phe Val Pro Pro Pro Pro Ser Pro Ala Pro Ser Asp Ser Pro Ala
        1155                1160                1165
Ser Pro Asp Glu Asp Leu Gln Ala Trp Asn Val Ser Leu Pro Pro Thr
    1170                1175                1180
Ala Gly Gln Glu Met Trp Thr Ser Ala Pro Ser Leu Pro Arg Leu Val
1185                1190                1195                1200
Arg Glu Pro Val Arg Cys Thr Cys Ser Ala Gln Gly Thr Gly Phe Ser
                1205                1210                1215
Cys Pro Asn Ser Val Gly Gly His Pro Pro Gln Met Arg Val Val Thr
            1220                1225                1230
Gly Asp Ile Leu Thr Asp Ile Thr Gly His Asn Val Ser Glu Tyr Leu
        1235                1240                1245
Leu Phe Thr Ser Asp Arg Phe Arg Leu His Arg Tyr Gly Ala Ile Thr
    1250                1255                1260
Phe Gly Asn Val Leu Lys Ser Ile Pro Ala Ser Phe Gly Thr Arg Ala
1265                1270                1275                1280
Pro Pro Met Val Arg Lys Ile Arg Cys Ala Arg Ala Ala Gln Val Phe
                1285                1290                1295
Tyr Asn Asn Lys Gly Tyr His Ser Met Pro Thr Tyr Leu Asn Ser Leu
            1300                1305                1310
Asn Asn Ala Ile Leu Arg Ala Asn Leu Pro Lys Ser Lys Gly Asn Pro
        1315                1320                1325
Ala Ala Tyr Gly Ile Thr Val Thr Asn His Pro Met Asn Lys Thr Ser
    1330                1335                1340
Ala Ser Leu Ser Leu Asp Tyr Leu Leu Gln Gly Thr Asp Val Val Ile
1345                1350                1355                1360
Ala Ile Phe Ile Ile Val Ala Met Ser Phe Val Pro Ala Ser Phe Val
                1365                1370                1375
Val Phe Leu Val Ala Glu Lys Ser Thr Lys Ala Lys His Leu Gln Phe
            1380                1385                1390
Val Ser Gly Cys Asn Pro Ile Ile Tyr Trp Leu Ala Asn Tyr Val Trp
        1395                1400                1405
Asp Met Leu Asn Tyr Leu Val Pro Ala Thr Cys Cys Val Ile Ile Leu
    1410                1415                1420
Phe Val Phe Asp Leu Pro Ala Tyr Thr Ser Pro Thr Asn Phe Pro Ala
1425                1430                1435                1440
Val Leu Ser Leu Phe Leu Leu Tyr Gly Trp Ser Ile Thr Pro Ile Met
                1445                1450                1455
Tyr Pro Ala Ser Phe Trp Phe Glu Val Pro Ser Ser Ala Tyr Xaa Phe
            1460                1465                1470
Leu Ile Val Ile Asn Leu Phe Ile Gly Ile Thr Ala Thr Val Ala Thr
        1475                1480                1485
Phe Leu Leu Gln Leu Phe Glu His Asp Lys Asp Leu Lys Val Val Asn
    1490                1495                1500
Ser Tyr Leu Lys Ser Cys Phe Leu Ile Phe Pro Asn Tyr Asn Leu Gly
```

1505 1510 1515 1520
His Gly Leu Met Glu Met Ala Tyr Asn Glu Tyr Ile Asn Glu Tyr Tyr
1525 1530 1535
Ala Lys Ile Gly Gln Phe Asp Lys Met Lys Ser Pro Phe Glu Trp Asp
1540 1545 1550
Ile Val Thr Arg Gly Leu Val Ala Met Ala Val Glu Gly Val Val Gly
1555 1560 1565
Phe Leu Leu Thr Ile Met Cys Gln Tyr Asn Phe Leu Arg Arg Pro Gln
1570 1575 1580
Arg Met Pro Val Ser Thr Lys Pro Val Glu Asp Asp Val Asp Val Ala
1585 1590 1595 1600
Ser Glu Arg Gln Arg Val Leu Arg Gly Asp Ala Asp Asn Asp Met Val
1605 1610 1615
Lys Ile Glu Asn Leu Thr Lys Val Tyr Lys Ser Arg Lys Ile Gly Arg
1620 1625 1630
Ile Leu Ala Val Asp Arg Leu Cys Leu Gly Val Arg Pro Gly Glu Cys
1635 1640 1645
Phe Gly Xaa Leu Gly Val Asn Gly Ala Gly Lys Thr Ser Thr Phe Lys
1650 1655 1660
Met Leu Thr Gly Asp Glu Ser Thr Thr Gly Gly Glu Ala Phe Val Asn
1665 1670 1675 1680
Gly His Ser Val Leu Lys Glu Leu Xaa Gln Val Gln Gln Ser Leu Gly
1685 1690 1695
Tyr Cys Pro Gln Cys Asp Ala Leu Phe Asp Glu Leu Thr Ala Arg Glu
1700 1705 1710
His Leu Gln Leu Tyr Thr Arg Leu Arg Gly Ile Xaa Trp Lys Asp Glu
1715 1720 1725
Ala Arg Val Val Lys Trp Ala Leu Glu Lys Leu Glu Leu Thr Lys Tyr
1730 1735 1740
Ala Asp Lys Pro Ala Gly Thr Tyr Ser Gly Gly Asn Lys Arg Lys Leu
1745 1750 1755 1760
Ser Thr Ala Ile Ala Leu Ile Gly Tyr Pro Ala Phe Ile Phe Leu Asp
1765 1770 1775
Glu Pro Thr Thr Gly Met Asp Pro Lys Ala Arg Arg Phe Leu Trp Asn
1780 1785 1790
Leu Ile Leu Asp Leu Ile Lys Thr Gly Arg Ser Val Val Leu Thr Ser
1795 1800 1805
His Ser Met Glu Glu Cys Glu Ala Leu Cys Thr Arg Leu Ala Ile Met
1810 1815 1820
Val Asn Gly Arg Leu Arg Cys Leu Gly Ser Ile Gln His Leu Lys Asn
1825 1830 1835 1840
Arg Phe Gly Asp Gly Tyr Met Ile Thr Val Arg Thr Lys Ser Ser Gln
1845 1850 1855
Ser Val Lys Asp Val Val Arg Phe Phe Asn Arg Asn Phe Pro Glu Ala
1860 1865 1870
Met Leu Lys Glu Arg His His Thr Lys Val Gln Tyr Gln Leu Lys Ser
1875 1880 1885
Glu His Ile Ser Leu Ala Gln Val Phe Ser Lys Met Glu Gln Val Ser
1890 1895 1900
Gly Val Leu Gly Ile Glu Asp Tyr Ser Val Ser Gln Thr Thr Leu Asp
1905 1910 1915 1920
Asn Val Phe Val Asn Phe Ala Lys Lys Gln Ser Asp Asn Leu Glu Gln
1925 1930 1935
Gln Glu Thr Glu Pro Pro Ser Ala Leu Gln Ser Pro Leu Gly Cys Leu

```
            1940                1945                1950
Leu Ser Leu Leu Arg Pro Arg Ser Ala Pro Thr Glu Leu Arg Ala Leu
        1955                1960                1965
Val Ala Asp Glu Pro Glu Asp Leu Asp Thr Glu Asp Glu Gly Leu Ile
    1970                1975                1980
Ser Phe Glu Glu Glu Arg Ala Gln Leu Ser Phe Asn Thr Asp Thr Leu
1985                1990                1995                2000
Cys
```

<210> 9
<211> 646
<212> PRT
<213> Homo sapiens

<400> 9

```
Met Ala Glu Lys Ala Leu Glu Ala Val Gly Cys Gly Leu Gly Pro Gly
 1               5                  10                  15
Ala Val Ala Met Ala Val Thr Leu Glu Asp Gly Ala Glu Pro Pro Val
            20                  25                  30
Leu Thr Thr His Leu Lys Lys Val Glu Asn His Ile Thr Glu Ala Gln
        35                  40                  45
Arg Phe Ser His Leu Pro Lys Arg Ser Ala Val Asp Ile Glu Phe Val
    50                  55                  60
Glu Leu Ser Tyr Ser Val Arg Glu Gly Pro Cys Trp Arg Lys Arg Gly
65                  70                  75                  80
Tyr Lys Thr Leu Leu Lys Cys Leu Ser Gly Lys Phe Cys Arg Arg Glu
                85                  90                  95
Leu Ile Gly Ile Met Gly Pro Ser Gly Ala Gly Lys Ser Thr Phe Met
            100                 105                 110
Asn Ile Leu Ala Gly Tyr Arg Glu Ser Gly Met Lys Gly Gln Ile Leu
        115                 120                 125
Val Asn Gly Arg Pro Arg Glu Leu Arg Thr Phe Arg Lys Met Ser Cys
    130                 135                 140
Tyr Ile Met Gln Asp Asp Met Leu Leu Pro His Leu Thr Val Leu Glu
145                 150                 155                 160
Ala Met Met Val Ser Ala Asn Leu Asn Leu Thr Glu Asn Pro Asp Val
                165                 170                 175
Lys Asn Asp Leu Val Thr Glu Ile Leu Thr Ala Leu Gly Leu Met Ser
            180                 185                 190
Cys Ser His Thr Arg Thr Ala Leu Leu Ser Gly Gly Gln Arg Lys Arg
        195                 200                 205
Leu Ala Ile Ala Leu Glu Leu Val Asn Asn Pro Pro Val Met Phe Phe
    210                 215                 220
Asp Glu Pro Thr Ser Gly Leu Asp Ser Ala Ser Cys Phe Gln Val Val
225                 230                 235                 240
Ser Leu Met Lys Ser Leu Ala Gln Gly Gly Arg Thr Ile Ile Cys Thr
                245                 250                 255
Ile His Gln Pro Ser Ala Lys Leu Phe Glu Met Phe Asp Lys Leu Tyr
            260                 265                 270
Ile Leu Ser Gln Gly Gln Cys Ile Phe Lys Gly Val Val Thr Asn Leu
        275                 280                 285
Ile Pro Tyr Leu Lys Gly Leu Gly Leu His Cys Pro Thr Tyr His Asn
```

```
    290                 295                 300
Pro Ala Asp Phe Ile Ile Glu Val Ala Ser Gly Glu Tyr Gly Asp Leu
305                 310                 315                 320
Asn Pro Met Leu Phe Arg Ala Val Gln Asn Gly Leu Cys Ala Met Ala
                325                 330                 335
Glu Lys Lys Ser Ser Pro Glu Lys Asn Glu Val Pro Ala Pro Cys Pro
            340                 345                 350
Pro Cys Pro Pro Glu Val Asp Pro Ile Glu Ser His Thr Phe Ala Thr
        355                 360                 365
Ser Thr Leu Thr Gln Phe Cys Ile Leu Phe Lys Arg Thr Phe Leu Ser
    370                 375                 380
Ile Leu Arg Asp Thr Val Leu Thr His Leu Arg Phe Met Ser His Val
385                 390                 395                 400
Val Ile Gly Val Leu Ile Gly Leu Leu Tyr Leu His Ile Gly Asp Asp
                405                 410                 415
Ala Ser Lys Val Phe Asn Asn Thr Gly Cys Leu Phe Phe Ser Met Leu
            420                 425                 430
Phe Leu Met Phe Ala Ala Leu Met Pro Thr Val Leu Thr Phe Pro Leu
        435                 440                 445
Glu Met Ala Val Phe Met Arg Glu His Leu Asn Tyr Trp Tyr Ser Leu
    450                 455                 460
Lys Ala Tyr Tyr Leu Ala Lys Thr Met Ala Asp Val Pro Phe Gln Val
465                 470                 475                 480
Val Cys Pro Val Val Tyr Cys Ser Ile Val Tyr Trp Met Thr Gly Gln
                485                 490                 495
Pro Ala Glu Thr Ser Arg Phe Leu Leu Phe Ser Ala Leu Ala Thr Ala
            500                 505                 510
Thr Ala Leu Val Ala Gln Ser Leu Gly Leu Leu Ile Gly Ala Ala Ser
        515                 520                 525
Asn Ser Leu Gln Val Ala Thr Phe Val Gly Pro Val Thr Ala Ile Pro
    530                 535                 540
Val Leu Leu Phe Ser Gly Phe Phe Val Ser Phe Lys Thr Ile Pro Thr
545                 550                 555                 560
Tyr Leu Gln Trp Ser Ser Tyr Leu Ser Tyr Val Arg Tyr Gly Phe Glu
                565                 570                 575
Gly Val Ile Leu Thr Ile Tyr Gly Met Glu Arg Gly Asp Leu Thr Cys
            580                 585                 590
Leu Glu Glu Arg Cys Pro Phe Arg Glu Pro Gln Ser Ile Leu Arg Ala
        595                 600                 605
Leu Asp Val Glu Asp Ala Lys Leu Tyr Met Asp Phe Leu Val Leu Gly
    610                 615                 620
Ile Phe Phe Leu Ala Leu Arg Leu Leu Ala Tyr Leu Val Leu Arg Tyr
625                 630                 635                 640
Arg Val Lys Ser Glu Arg
                645
```

<210> 10
<211> 638
<212> PRT
<213> Homo sapiens

<400> 10
Met Glu Ala Thr Glu Thr Asp Leu Leu Asn Gly His Leu Lys Lys Val

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 1               5                  10                  15
Asp Asn Asn Leu Thr Glu Ala Gln Arg Phe Ser Ser Leu Pro Arg Arg
            20                  25                  30
Ala Ala Val Asn Ile Glu Phe Arg Asp Leu Ser Tyr Ser Val Pro Glu
        35                  40                  45
Gly Pro Trp Trp Arg Lys Lys Gly Tyr Lys Thr Leu Leu Lys Gly Ile
    50                  55                  60
Ser Gly Lys Phe Asn Ser Gly Glu Leu Val Ala Ile Met Gly Pro Ser
65                  70                  75                  80
Gly Ala Gly Lys Ser Thr Leu Met Asn Ile Leu Ala Gly Tyr Arg Glu
                85                  90                  95
Thr Gly Met Lys Gly Ala Val Leu Ile Asn Gly Leu Pro Arg Asp Leu
            100                 105                 110
Arg Cys Phe Arg Lys Val Ser Cys Tyr Ile Met Gln Asp Asp Met Leu
        115                 120                 125
Leu Pro His Leu Thr Val Gln Glu Ala Met Met Val Ser Ala His Leu
    130                 135                 140
Lys Leu Gln Glu Lys Asp Glu Gly Arg Arg Glu Met Val Lys Glu Ile
145                 150                 155                 160
Leu Thr Ala Leu Gly Leu Leu Ser Cys Ala Asn Thr Arg Thr Gly Ser
                165                 170                 175
Leu Ser Gly Gly Gln Arg Lys Arg Leu Ala Ile Ala Leu Glu Leu Val
            180                 185                 190
Asn Asn Pro Pro Val Met Phe Phe Asp Glu Pro Thr Ser Gly Leu Asp
        195                 200                 205
Ser Ala Ser Cys Phe Gln Val Val Ser Leu Met Lys Gly Leu Ala Gln
    210                 215                 220
Gly Gly Arg Ser Ile Ile Cys Thr Ile His Gln Pro Ser Ala Lys Leu
225                 230                 235                 240
Phe Glu Leu Phe Asp Gln Leu Tyr Val Leu Ser Gln Gly Gln Cys Val
                245                 250                 255
Tyr Arg Gly Lys Val Cys Asn Leu Val Pro Tyr Leu Arg Asp Leu Gly
            260                 265                 270
Leu Asn Cys Pro Thr Tyr His Asn Pro Ala Asp Phe Val Met Glu Val
        275                 280                 285
Ala Ser Gly Glu Tyr Gly Asp Gln Asn Ser Arg Leu Val Arg Ala Val
    290                 295                 300
Arg Glu Gly Met Cys Asp Ser Asp His Lys Arg Asp Leu Gly Gly Asp
305                 310                 315                 320
Ala Glu Val Asn Pro Phe Leu Trp His Arg Pro Ser Glu Glu Val Lys
                325                 330                 335
Gln Thr Lys Arg Leu Lys Gly Leu Arg Lys Asp Ser Ser Ser Met Glu
            340                 345                 350
Gly Cys His Ser Phe Ser Ala Ser Cys Leu Thr Gln Phe Cys Ile Leu
        355                 360                 365
Phe Lys Arg Thr Phe Leu Ser Ile Met Arg Asp Ser Val Leu Thr His
    370                 375                 380
Leu Arg Ile Thr Ser His Ile Gly Ile Gly Leu Leu Ile Gly Leu Leu
385                 390                 395                 400
Tyr Leu Gly Ile Gly Asn Glu Ala Lys Lys Val Leu Ser Asn Ser Gly
                405                 410                 415
Phe Leu Phe Phe Ser Met Leu Phe Leu Met Phe Ala Ala Leu Met Pro
            420                 425                 430
Thr Val Leu Thr Phe Pro Leu Glu Met Gly Val Phe Leu Arg Glu His
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         435                 440                 445
Leu Asn Tyr Trp Tyr Ser Leu Lys Ala Tyr Tyr Leu Ala Lys Thr Met
    450                 455                 460
Ala Asp Val Pro Phe Gln Ile Met Phe Pro Val Ala Tyr Cys Ser Ile
465                 470                 475                 480
Val Tyr Trp Met Thr Ser Gln Pro Ser Asp Ala Val Ala Phe Val Leu
                485                 490                 495
Phe Ala Ala Leu Gly Thr Met Thr Ser Leu Val Ala Gln Ser Leu Gly
            500                 505                 510
Leu Leu Ile Gly Ala Ala Ser Thr Ser Leu Gln Val Ala Thr Phe Val
        515                 520                 525
Gly Pro Val Thr Ala Ile Pro Val Leu Leu Phe Ser Gly Phe Phe Val
    530                 535                 540
Ser Phe Asp Thr Ile Pro Thr Tyr Leu Gln Trp Met Ser Tyr Ile Ser
545                 550                 555                 560
Tyr Val Arg Tyr Gly Phe Glu Gly Val Ile Leu Ser Ile Tyr Gly Leu
                565                 570                 575
Asp Arg Glu Asp Leu His Cys Asp Ile Asp Glu Thr Cys His Phe Gln
            580                 585                 590
Lys Ser Glu Ala Ile Leu Arg Glu Leu Asp Val Glu Asn Ala Lys Leu
        595                 600                 605
Tyr Leu Asp Phe Ile Val Leu Gly Ile Phe Phe Ile Ser Leu Arg Leu
    610                 615                 620
Ile Ala Tyr Phe Val Leu Arg Tyr Lys Ile Arg Ala Glu Arg
625                 630                 635
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